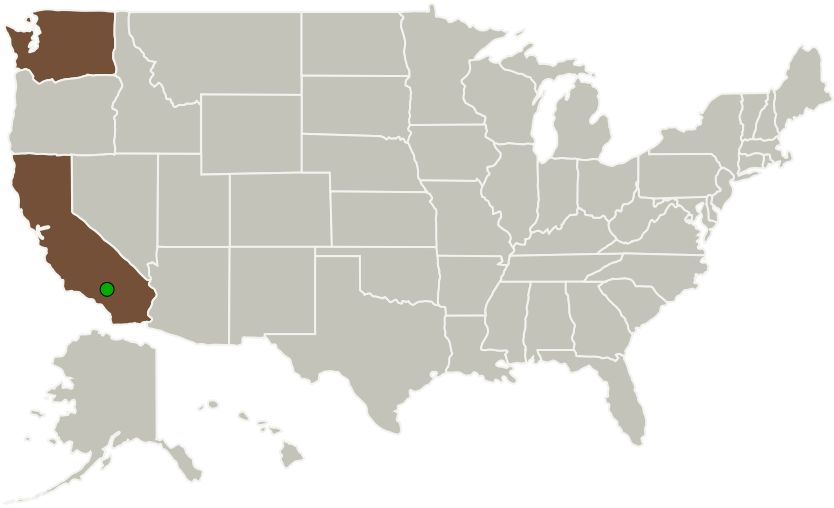
Innovative Aerodynamic Modeling for Aeroservoelastic Analysis and Design, Phase I

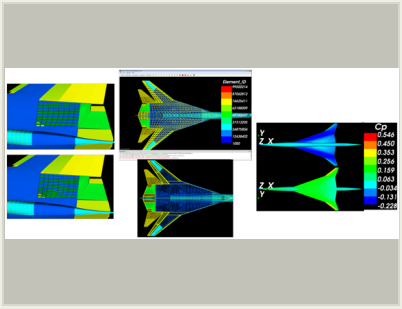
Completed Technology Project (2015 - 2016)

Project Introduction

We propose the development of a modern panel code for calculation of steady and unsteady aerodynamic loads needed for dynamic servoelastic (DSE) analysis of flight vehicles. The code will be especially tailored to be robust, reliable, and integrated with the NASA Object Oriented Optimization (O3) system through selection of analysis methods, file formats, and computing environment, allowing it to be efficiently applied to numerous problems of interest to NASA and industry.

Primary U.S. Work Locations and Key Partners





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Organizations Performing Work	Role	Type	Location
M4 Engineering, Inc.	Lead Organization	Industry Women-Owned Small Business (WOSB)	Long Beach, California
Armstrong Flight Research Center(AFRC)	Supporting Organization	NASA Center	Edwards, California
University of Washington-Seattle Campus(UW)	Supporting Organization	Academia Alaska Native and Native Hawaiian Serving Institutions (ANNH)	Seattle, Washington

Primary U.S. Work Locations	
California	Washington

Project Transitions

June 2015: Project Start

June 2016: Closed out

Closeout Summary: Innovative Aerodynamic Modeling for Aeroservoelastic An alysis and Design, Phase I Project Image

Closeout Documentation:

- Final Summary Chart Image*(https://techport.nasa.gov/file/138992)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

M4 Engineering, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Myles Baker

Co-Investigator:

Myles Baker

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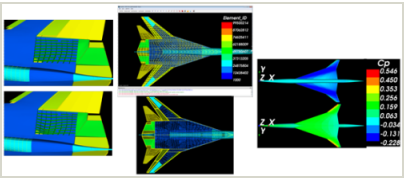
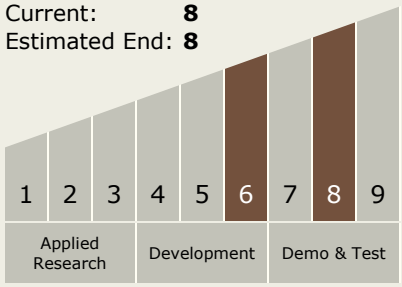
Images



Briefing Chart Image
Innovative Aerodynamic Modeling for Aeroservoelastic Analysis and Design, Phase I
(https://techport.nasa.gov/image/133907)

Technology Maturity (TRL)

Start: **6**
Current: **8**
Estimated End: **8**



Technology Areas

Primary:

- TX02 Flight Computing and Avionics
  - TX02.1 Avionics Component Technologies
    - TX02.1.3 High Performance Processors

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System